

REMARKS35 U.S.C. 103 (a) Rejection Based Upon Fisher et al. in view of Rao et al.

Claims 1-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al., U.S. Patent No. 6,762,832, in view of Rao et al., U.S. Patent No. 5,278,074. In particular, the Examiner in response to Applicants arguments states that “...the Examiner would maintain that if Rao is capable of operating efficiently in a system that has extraneous contaminants, it would be clearly capable of operating in an ultrapure system.” (Emphasis added.) (Page 5 of the Office Action.)

Applicants respectfully traverse this rejection.

Fisher et al. describes both a method for monitoring and controlling the concentration of a corrosion inhibitor, for example a triazole, in a composition and a semiconductor processing method that monitors and controls the concentration of a corrosion inhibitor, for example a triazole, by performing an absorption spectroscopy measurement on a sample of said composition and a sample of the solution, respectively. Fisher et al. further describes a semiconductor processing system that includes a chemical bath tank containing a solution for treating a semiconductor substrate; one or more conduits for introducing process materials into the chemical bath; the process materials containing a component to be monitored; an absorption spectroscopy apparatus for measuring the concentration of the component in a sample of the solution; and a feedback control means for controlling the concentration of the component in the solution based on the absorption spectroscopy measurement. Fisher et al. unequivocally states that “the present invention operates on the basis of light absorption.” (Column 3, lines 29-30).

Rao et al. describes a fluorometric method for monitoring and controlling the concentration of aromatic azole corrosion inhibitors in the water of an industrial aqueous system which is based upon the measurement of the aromatic azole corrosion inhibitor itself, and the precise determination of concentration permits control of the dosage of such aromatic azole corrosion inhibitor. Rao describes a method for monitoring that involves fluorescing a sample of water from the aqueous system, and determining the concentration of the aromatic azole concentration inhibitor from its fluorescent intensity.

Rao additionally describes the further step of maintaining a desired concentration of an aromatic corrosion inhibitor by adding a sufficient amount of corrosion inhibitor to the aqueous system. The invention is applicable to industries that require corrosion inhibitors for aqueous systems, such as cooling water systems, boilers, and other water streams, and in particular for industrial scale aqueous systems. This disclosure does not mention the use of this technique for semiconductor devices.

Applicants assert that one of ordinary skill in the art would not substitute the fluorescent measurement/monitoring taught by Rao et al., for the spectroscopic monitoring in the corrosion control system of Fisher et al., because the operating conditions which occur in semiconductor devices are very different from conditions which occur in industrial systems exemplified in Rao et al., cooling water systems and boiler water systems.


Applicants disagree with the Examiner's argument that if a system operates in an environment with extraneous contaminants then it would clearly operate in an ultrapure system. Ultrapure water systems contain different chemistries than systems that contain extraneous contaminants such as anions/cations. Therefore, for the Examiner to maintain that "...if Rao is capable of operating efficiently in a system that has extraneous contaminants, [then] it would be clearly capable of operating in an ultrapure system" is not accurate and does not appreciate how the chemistries of a system affect the ability to monitor a system.

Therefore, Applicants respectfully request that the Examiner withdraw this rejection and issue a Notice of Allowance for claims 1-21.

CONCLUSION

Applicants submit that based upon the above Remarks all pending claims are in condition for allowance and respectfully request that a Notice of Allowance be sent for the application.

Respectfully Submitted,


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